Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: XTO Energy, Inc.
Well Name/Number: Hillary 42X-3
Location: SE NE Section 3 T22N R58E
County: Richland **, MT; Field (or Wildcat)** Wildcat

Air Quality

(possible concerns)
Long drilling time: No, 25-35 days drilling time.
Unusually deep drilling (high horsepower rig): A triple derrick rig, estimated 900-1000 HP to drill a single lateral Bakken Formation Horizontal, 19,750'MD/10,342'TVD.
Possible H2S gas production: Slight
In/near Class I air quality area: No, not in a Class I air quality area.
Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under rule 75-2-211.

Mitigation:
X Air quality permit (AQB review)
X Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:_____
Comments: Existing pipeline for H2S gas and sweet gas in the area._____
_____

Water Quality

(possible concerns)
Salt/oil based mud: Yes to intermediate casing string hole, oil based invert drilling fluids. Saltwater for the horizontal openhole lateral. Surface casing hole to be drilled with freshwater and freshwater mud.
High water table: No high water table anticipated.
Surface drainage leads to live water: No, closest drainage is an unnamed ephemeral tributary drainage to Spring Coulee, also an ephemeral drainage, about 1/8 of a mile to the southeast from this location.
Water well contamination: None, surface hole will be drilled with freshwater and freshwater drilling fluids to 1,700', steel surface casing will be run and cemented to surface from 1700' to protect any ground and surface waters. Closest water wells is about 3/8 of a mile to the southwest from this location. All other wells are 5/8 of a mile or further from this location. Depth of these domestic and stock water wells are from 60' and 1540'.
Porous/permeable soils: Possibly, sandy clay soils.
Class I stream drainage: No, Class I stream drainage.

Mitigation:
X Lined reserve pit
X Adequate surface casing
__ Berms/dykes, re-routed drainage
__ Closed mud system
__ Off-site disposal of liquids (in approved facility)
__ Other: _____.
Comments: 1700' of surface casing is not enough surface casing to cover Base Fox Hills Formation. Recommend surface hole to be drilled with freshwater and freshwater drilling muds to 1752'. Steel surface casing will be run to 1752' and cemented to surface. Oil based invert drilling fluids will be recycled. Drill cuttings will be disposed of in the lined pit. After the well has been completed, completions fluids will go to a commercial Class II disposal.

Soils/Vegetation/Land Use

(possible concerns)
Steam crossings: None, anticipated.
High erosion potential: No high erosion potential, small cut, 9.5' and small fill, up to 4.2', required.
Loss of soil productivity: None, location to be restored after drilling well, if well is nonproductive. If productive unused portion of drillsite will be reclaimed.
Unusually large wellsite: No, large well site 430'X330'.
Damage to improvements: Slight, surface use is cultivated land.
Conflict with existing land use/values: Slight.

Mitigation

__ Avoid improvements (topographic tolerance)
__ Exception location requested
X Stockpile topsoil
__ Stream Crossing Permit (other agency review)
X Reclaim unused part of wellsite if productive
__ Special construction methods to enhance reclamation
X Other: Requires DEQ General Permit for Storm Water Discharge Associated with Construction Activity, under ARM 17.30.1102(28).

Comments: Access will be over existing county road, #124. A short new access road, about 0.4 of a mile will be built into this location. Oil based drilling fluids will be recycled. Completion fluids will be hauled to a Class II commercial disposal. Drill cuttings will be buried in the lined reserve pit. No concerns.

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences: Closest residences about ½ of a mile to the southeast , 3/4 of a mile to the south and ¾ of a mile to the southwest from this location.
Possibility of H2S: Slight
Size of rig/length of drilling time: Triple derrick drilling rig, 25 to 35 days drilling time.

Mitigation:

_X Proper BOP equipment
__ Topographic sound barriers
__ H2S contingency and/or evacuation plan
__ Special equipment/procedures requirements
__ Other:_____

Comments: Adequate surface casing cemented to surface with working BOP stack should mitigate any problems.

Wildlife/recreation

(possible concerns)
Proximity to sensitive wildlife areas (DFWP identified): None identified.
Proximity to recreation sites: None identified.
Creation of new access to wildlife habitat: No
Conflict with game range/refuge management: No, no game range/refuge in the area.
Threatened or endangered Species: Threatened or endangered species identified by USFWS in Richland County are the Pallid Sturgeon, Whooping Crane, Interior Lease Tern and Piping Plover.

Mitigation:

__ Avoidance (topographic tolerance/exception)
__ Other agency review (DFWP, federal agencies, DSL)
__ Screening/fencing of pits, drillsite
__ Other: _____

Comments: Private cultivated surface lands away from live water. No concerns.

_____
_____

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites __None identified.__

Mitigation

__ avoidance (topographic tolerance, location exception)

__ other agency review (SHPO, **DSL**, federal agencies)

__ Other:_____

Comments: _Private cultivated surface lands away from live water. No concerns.

Social/Economic

(possible concerns)

__ Substantial effect on tax base

__ Create demand for new governmental services

__ Population increase or relocation

Comments: _Horizontal Bakken Formation development oil well to an existing spacing unit. No concerns.

_____

_____

Remarks or Special Concerns for this site

__Single lateral Bakken Formation development horizontal well 19,750'MD/10,342'TVD.

_____

Summary: Evaluation of Impacts and Cumulative effects

_No long term impacts expected. Some short term impacts will occur.

_____

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC):___/s/ Steven Sasaki_____

(title:)_Chief Field Inspector_____ _____

Date:_February 19, 2010_____

Other Persons Contacted:

_____

Montana Bureau of Mines and Geology, GWIC website_____

(Name and Agency)

Richland County water wells_____

(subject discussed)

_February 19, 2010_____

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Richland County

February 19, 2010_____
(date)

If location was inspected before permit approval:
Inspection date: _____
Inspector: _____
Others present during inspection:_____